Data and Analysis - InfoPome

Apple & Pear Australia Limited (APAL)

Project Number: AP11033

AP11033

This report is published by Horticulture Innovation Australia Ltd to pass on information concerning horticultural research and development undertaken for the apple and pear industry.

The research contained in this report was funded by Horticulture Innovation Australia Ltd with the financial support of the apple and pear industry.

ISBN 0 7341 3497 5

Published and distributed by:
Horticulture Innovation Australia Ltd
Level 8
1 Chifley Square
Sydney NSW 2000
Telephone: (02) 8295 2300
Fax: (02) 8295 2399

Horticulture Innovation Australia

FINAL REPORT

AP11033: “Data and Analysis - InfoPome”

Authors: Claire Fitchett, Market Development Manager and Annie Farrow, Manager Industry Services, Apple and Pear Australia Ltd

Research Provider: Apple and Pear Australia Limited

Date: January 2015

Apple & Pear Australia

Horticulture Innovation Australia

FINAL REPORT
AP11033: "Data and Analysis - InfoPome"

Horticulture Innovation Australia Ltd Project Number: AP11033

Key Personnel

Project Leader:
Claire Fitchett
Market Development Manager
Apple and Pear Australia Limited
39 O'Connell Street
North Melbourne, Victoria 3051
Australia

Project Manager:
Annie Farrow
Industry Services Manager
Apple and Pear Australia Limited
39 O'Connell St,
North Melbourne, Victoria, 3051
Australia

Purpose
This report is the Final Report of the project known as AP11033 "Data and Analysis - InfoPome"

Funding
This project was funded by Horticulture Innovation Australia Limited (HIA Ltd) with co-investment from the apple and pear levy and from the Australian Government.

Date
30 January 2015

Disclaimer
Horticulture Innovation Australia Limited (HIA Ltd) makes no representations and expressly disclaims all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in the report of project "AP11033 Data and Analysis – InfoPome". Users of this material should take independent action before relying on it's accuracy in any way.

Reliance on any information provided by HIA Ltd is entirely at your own risk. HIA Ltd is not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from HIA Ltd or any other person's negligence or otherwise) from your use or non-use of AP11033 Data and Analysis – InfoPome or from reliance on information contained in the material or that HIA Ltd provides to you by any other means.

Contents

1. Media Summary

Infopome is the apple and pear industry’s stock tracking system. Cool store data is voluntarily provided by growers and collated into a national report of the amounts of apples and pears in coolstore by month. The report is separated by variety and state – allowing growers to see stock levels currently available in storage.

Infopome has the potential to help growers make better business decisions when it comes to deciding when to move stock.

Detailed reports are available to contributors and key industry representatives within Australia.

The data reported follows a similar pattern each year. Coolstore stocks rise rapidly during the harvest months of February, March and April and are slowly reduced over the following months. The key information is the amount of fruit in store at a particular time, especially compared to the amount held at that time the previous year. These comparisons allow growers/packers/marketers to make informed decisions about the volume of fruit they will sell in the next period and the price they will ask for that fruit.

See more at: http://apal.org.au/supply-chain/pack-houses-cool-stores/infopome/#sthash.IT76mny3.dpuf

2. Technical Summary

InfoPome is a data gathering, analysis and reporting service for the Australian apple and pear industry. The reports generated allow apple and pear growers to be better informed to make fruit sales decisions related to volumes and prices.

InfoPome is an online data base system where cool store operators from across Australia enter their stocks of apples and pears into a database each month. The system totals the amounts entered and produces a national report of the amount of fruit in store – including a variety and by state breakdown. The software also reports comparisons, on a variety by variety basis, of the volumes of fruit in store in the current year with the volumes in store in the two previous years.
Such comparisons allow growers to make informed decisions related to the volume of fruit they will offer for sale in the next period and the price at which such fruit will be offered.

The InfoPome project has had good success in coordinating this centralised stock reporting system for the industry. However there have been some challenges in getting the system to work effectively. While key stakeholders within the industry are committed to supporting an ongoing stock tracking system to enable better business decision making, a number of cool store operators do not regularly enter their data onto the system. This results in the need for time-consuming follow-up by Apple and Pear Australia Limited (APAL).

In the future, APAL itself intends invest in further development of the InfoPome software and will continue to seek funds from HIA Ltd to operate the system. To make the system completely effective the number of participants will be reduced to those who will commit to weekly data submission and the system itself will move to weekly reporting to provide more accurate and timely information to those who wish to participate.

3. Introduction

The Cool Store Stock Report (as it was previously named) is a service that APAL has provided the apple and pear industry for more than a decade. Its purpose was to inform growers and packers and marketers (the people who decide on fruit sales) of the amount of fruit held in store across the nation and compare that amount to the amount held, at that time of the year, in the previous season. In Australia volume available is one of the largest factors impacting fruit price. Accordingly, comparisons with the volumes held in store this year (vs the previous year) and the prices obtained last year (for the volume available) gives an indication of pricing for the current season. It also gives an indication of whether the grower/packer/marketer should hold on to their fruit or sell out of it.

Up until 2011, the Cool Store Stock Report was a manually prepared report with cool store owners filling in an emailed for faxed form and a staff member at APAL inputting data into a data base from which a report was generated. It was a time consuming process. This on-going analysis/report writing was funded through AP08055.

In 2011, APAL changed to an online system – InfoPome. This was developed with a grant from Victorian Government aimed at upgrading market intelligence for the rural industries.

In the first version of InfoPome an electronic form was sent to cool store owners who were able to input their data and send it back to the data base where it was automatically collated. Reports were easily generated once the data collection was completed.

Some relatively minor issues were encountered but by the end of the first year, most cool store owners in the system were comfortable with the process. The aims of AP11033 were

- to further upgrade the database and its ease of use;
- to provide twice monthly reports,
- to bring on board all cool stores instead of just a representative group and
- to provide brief summary reports via email with a detailed report available on the APAL website.

4. Project Methodology

The project involved upgrading the previous system to:

- provide data capture twice monthly (the previous system worked on a monthly basis). Note: As the project went on it became apparent that fortnightly data contributions would not be achieved and the project went back to seeking monthly contributions;
- capture additional data to estimate class one fruit pack out to get a better picture of fruit availability for fresh and processing.
- prepare reports
- allow data entry on line

Graeme Forsythe and Associates (GFA) performed the system upgrades to

- incorporate the fortnightly data (as compared to the previous monthly data inputs);
- allow the reporting of Class 1 fruit stocks (as distinct from Class 2); and
- generate the appropriate report.

GFA also supported the program throughout the project and hosted the database.

APAL followed up growers to encourage them to submit their coolstore stock data and distributed the reports generated from the database to growers via email.

Overall this methodology has been simple and effective – once data has been entered into the system. The coolstore managers simply needed to go on line each fortnight (by a specified day) and enter, in a simple format, the number of bins of each variety that they had in store at that time. Varieties reported on were:

Apples	Pears
• Fuji • Gala • Golden Delicious • Granny Smith • Cripps Pink (Pink Lady®) • Red Delicious • Cripps Red (Sundowner®) • Other apples	• Beure Bosc • Packham • Williams • Other

5. Results

The results of AP11033 are the InfoPome reports that were distributed (initially) twice weekly during the period of the project and then monthly (from 2012). An example of the format in which the reports were emailed to growers can be obtained from Attachment 1. The reports are tightly formatted and difficult to provide in a document such as this. Examples of the data provided in the reports is provided below

5.1 Data provided in the reports

Each month three reports are provided by the system. They are accessed through the Members section of the APAL website. The reports are:

- the InfoPome apple report for the month
- the InfoPome pear report for the month
- the InfoPome "Lite" report for the month

5.1.1 Full InfoPome Reports

The full InfoPome report for both apple and pear are similar. They contain:

Summary Table: this provides by state and nationally and by variety:

- Opening no of bins in store
- Stock movements – in and out
- Closing number of bins in store
- Class 1 closing number of bins

An example of the summary table is provided at Table 1, below.

Variety Table and Charts

Table 2 provides an example of the data provided for each variety – in this case Fuji. This is for Fuji apples for the month of June 2012. As can be seen from Table 2, the data provided relates to:

- the tonnage Fuji in store for 2012 (12,463 t), 2011 and 2010
- the average amount (for 2010 to 2012) of Fuji in store by month
- the fruit clearance rate. By June 2012 20% of fruit in store had been sold compared to an average of 17% (by June) in the two previous years
- The amount of Fuji left in store – 80% for June 2012
- the stock comparison against 2011 and an average of 2010 and 2011. By June 2012 5% less stock had been sold than in the previous year.

Two graphical presentations of the data in Table 2 are also provided in Figure 1 and Figure 2 (below).

Tables and charts similar to those in Table 2 and Figures 1 and 2 were provided for each variety of apples and pears reported (see Methodology Section).

5.1.2 InfoPome "Lite" Report

This simply provides the "Closing Stock" tonnage for the month for each variety. See Table 3, below.

Table 1: InfoPome Cool Stores Stock Report for Apples – as at 30/6/2012
Compiled by Apple & Pear Australia Limited. Units are metric tonnes.

		Fuji	Gala	Golden Delicious	Granny Smith	Pink Lady	Red Delicious	Sun-downer	Other Apple	All Apples
NSW	Opening	5,121	4,067	64	1,683	4,852	7,229	729	1,326	25,071
	Stock In	0	0	0	0	0	0	0	0	0
	Stock Out	-1,680	-2,441	-3	-402	-420	-2,843	-106	-684	-8,578
	Closing	3,439	1,626	60	1,280	4,432	4,385	623	642	16,488
	Class 1	1,981	909	40	1,026	3,546	3,508	363	400	11,773
QLD	Opening	319	4,957	0	2,079	2,649	1,817	1,430	43	13,295
	Stock In	0	0	0	0	917	0	702	0	1,619
	Stock Out	-93	-397	0	-180	-552	-96	0	-30	-1,347
	Closing	221	4,560	0	1,899	3,016	1,721	2,132	14	13,564
	Class 1	166	3,703	0	1,393	2,617	1,332	1,696	9	10,917
SA	Opening	1,794	2,537	506	1,765	4,417	1,212	785	124	13,140
	Stock In	119	112	24	134	332	86	94	0	901
	Stock Out	-57	-86	-28	-22	-86	-22	0	-19	-320
	Closing	1,854	2,562	501	1,878	4,663	1,275	879	105	13,717
	Class 1	1,240	1,426	242	1,227	2,103	815	437	87	7,577
TAS	Opening	1,935	3,806	766	710	1,474	1,393	398	551	11,034
	Stock In	0	0	0	0	0	0	0	0	0
	Stock Out	-229	-163	-49	-124	-329	-20	-71	-63	-1,049
	Closing	1,703	3,645	717	586	1,144	1,374	327	488	9,984
	Class 1	1,303	3,192	473	464	910	1,230	268	371	8,211
VIC	Opening	4,121	5,497	448	21,808	27,621	5,587	10,133	641	75,855
	Stock In	829	2,455	0	1,467	3,645	2,458	1,337	189	12,380
	Stock Out	-1,016	-2,175	-57	-3,474	-4,965	-3,219	-1,356	-409	-16,671
	Closing	3,932	5,778	392	19,798	26,302	4,826	10,114	421	71,562
	Class 1	2,899	4,514	325	12,480	18,422	3,908	6,740	303	49,590
WA	Opening	1,485	3,984	0	5,333	6,089	558	672	0	18,122
	Stock In	0	0	0	0	520	0	542	0	1,062
	Stock Out	-173	-87	0	-87	-173	-43	0	0	-564
	Closing	1,312	3,897	0	5,247	6,436	515	1,214	0	18,620
	Class 1	756	1,997	0	2,634	2,550	168	572	0	8,677
Total	Opening	14,775	24,848	1,784	33,379	47,102	17,797	14,146	2,685	156,516
	Stock In	948	2,567	24	1,601	5,414	2,544	2,675	189	15,962
	Stock Out	-3,250	-5,349	-137	-4,289	-6,525	-6,242	-1,532	-1,205	-28,529
	Closing	12,461	22,069	1,670	30,688	45,993	14,095	15,289	1,669	143,935
	Class 1	8,345	15,740	1,080	19,224	30,149	10,960	10,076	1,170	96,745

Table 2: Variety stock data for Fuji at 30 June 2012

		Fuji				Clearance Rate		% Crop Left		Stock Comparison	
		Ave 2010 to 2012	2010	2011	2012	Ave 2010 to 2012	2012	Ave 2010 to 2012	2012	vs Ave 2010 to 2012	vs 2011
2012	Jan	627	842	9	1,030	96%	93%	4%	7%	64%	11,344%
2012	Feb	150	320	12	117	99%	100%	0%	0%	-22%	875%
2012	Mar	2,223	1,385	1,573	3,711						
2012	Apr	13,457	12,111	14,938	13,321						
2012	May	13,648	11,006	14,392	15,547			100%	100%	14%	8%
2012	Jun	11,384	8,543	13,146	12,463	17%	20%	83%	80%	9%	-5%
2012	Jul	9,049	6,943	11,154		34%		66%			
2012	Aug	6,840	4,826	8,854		50%		50%			
2012	Sep	5,016	3,301	6,731		63%		37%			
2012	Oct	3,434	1,780	5,088		75%		25%			
2012	Nov	1,642	476	2,807		88%		12%			
2012	Dec	868	273	1,462		94%		6%			

Figure1: Graphical Representation 1 – For Fuji in June 2012

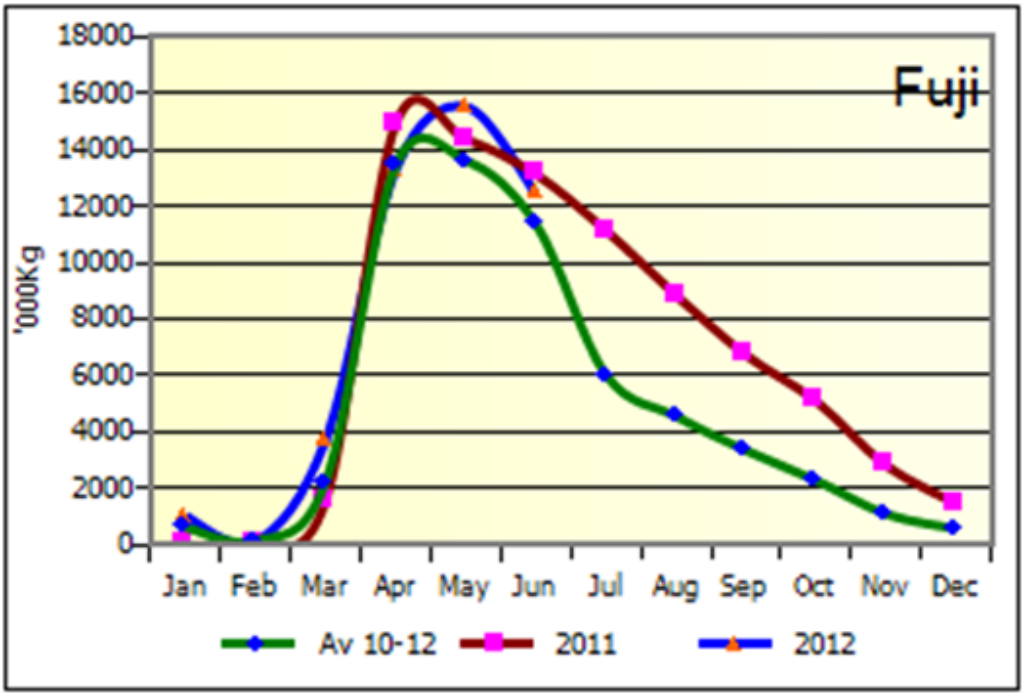

Figure 2: Graphical Representation 2 – for Fuji in June 2012

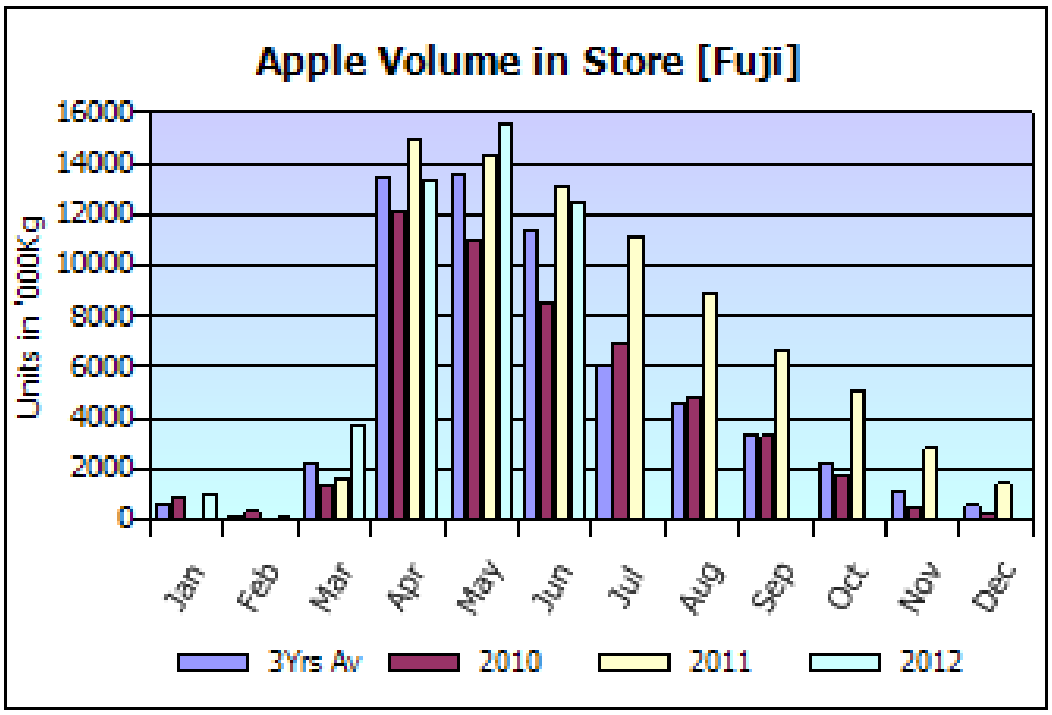

Table 3: InfoPome "Lite" report
InfoPome Cool Stores Stock Summary Report – as at 30/6/2012
Compiled by Apple & Pear Australia Limited. Units are **metric tonnes**

		Fuji	Gala	Golden Delicious	Granny Smith	Pink Lady	Red Delicious	Sun-downer	Other Apple	All Apples
NSW	Closing Stock	3,439	1,626	60	1,280	4,432	4,385	623	642	16,488
QLD	Closing Stock	221	4,560	0	1,899	3,016	1,721	2,132	14	13,564
SA	Closing Stock	1,854	2,562	501	1,878	4,663	1,275	879	105	13,717
TAS	Closing Stock	1,703	3,645	717	586	1,144	1,374	327	488	9,984
VIC	Closing Stock	3,932	5,778	392	19,798	26,302	4,826	10,114	421	71,562
WA	Closing Stock	1,312	3,897	0	5,247	6,436	515	1,214	0	18,620
Total	Closing Stock	12,461	22,069	1,670	30,688	45,993	14,095	15,289	1,669	143,935

		Beure Bosc	Packham	Williams	Other Pear	Corella	All Pears
NSW	Closing Stock	71	84	0	7	10	171
SA	Closing Stock	244	1,519	0	291	117	2,171
TAS	Closing Stock	0	0	0	0	0	0
VIC	Closing Stock	1,295	17,422	0	1,502	328	20,547
WA	Closing Stock	707	1,041	0	46	0	1,794
Total	Closing Stock	2,317	20,065	0	1,846	455	24,683

5.2 Email utilisation traffic

Email "open rate" and "click through" statistics provide a useful indicator of the value email recipients place on the information contained in an unsolicited email – as is the case with the email from APAL delivering the InfoPome report each month.

Open Rate: indicates % or number of people who open the email when it is sent
Click Through Rate: which indicates the number/% of people who were interested enough to click a link for more info.

Table 4: Email data for InfoPome data

Send Date	Total Recipients	Successful Deliveries	Unique Opens	Open Rate	Total Opens	Unique Clicks	Click Rate	Total Clicks
12/02/2104	152	148	77	52.03%	188	26	17.57%	42
14/03/2014	152	151	84	55.63%	227	36	23.84%	87
16/04/2014	155	154	80	51.95%	219	42	27.27%	90
12/05/2014	157	157	92	58.60%	225	41	26.11%	104
11/06/2014	163	162	97	59.88%	270	40	24.69%	110
21/07/2014	170	170	101	59.41%	289	49	28.82%	120
14/08/2014	171	170	88	51.76%	294	45	26.47%	136
12/09/2014	170	168	92	54.76%	295	47	27.98%	124
13/10/2014	171	170	98	57.65%	242	50	29.41%	122
11/11/2014	177	176	104	59.09%	253	58	32.95%	136
12/12/2014	177	176	98	55.68%	256	43	24.43%	89
8/01/2015	180	179	91	50.84%	198	42	23.46%	87

Anyone can subscribe to the InfoPome service and numbers increased (by 18%) during 2014. An average of 55% of those who requested the InfoPome report to be sent to them opened the email and an average of 26% of people who received the email "clicked through" to the actual InfoPome report.

While these are quite high proportions for routine delivery emails, they highlight the need for more timely data – as is proposed for the next version of InfoPome.

6. Discussion

The Achilles Heal of any database system is the quality of data entered. This has proved to be the case with InfoPome. While the system itself is simple, easy to use and effective, not all coolstore operators have regularly entered their data on time.

For the InfoPome system to work effectively, all contributors must contribute data every reporting period. For AP11033, stock was to be reported fortnightly. However, due to the considerable time taken to chase missing data, it was agreed in 2012 to revert to monthly reporting.

The problem with monthly reporting is that monthly data is not timely enough. Almost all fruit sales work on a weekly "offer and order" system. Growers/packers/marketers (it can be any of these three) submit (to the supermarket or other customer) an offer for the volume of fruit they can supply and the price at which they can supply it. The retailer accepts or modifies the offer and responds with an order – for a volume of fruit, at a price, to be delivered to a particular destination (an Australian capital city), on a particular date. By the time the InfoPome data is a week old it is out of date. By the time it is a month old it is almost useless.

During the term of the project it became apparent that whilst a small cohort of committed participants were regularly contributing data without APAL follow up, a large percentage of coolstore operators required chasing every month - often more than once. The extent of this follow up far exceeded the time and cost budgeted in the project for APAL to provide this service.

Despite being chased by email and phone, some contributors still did not enter or provide their data. In an attempt to overcome this industry leaders were enlisted to encourage the recalcitrant contributors. This had some success but over time contribution rates dropped again.

Implications of missing data.
If data is missing for a particular coolstore, the system automatically rolls over the previous month's figures. This causes problems because figures can be artificially inflated for months at a time, then adjustments occur resulting in sharp drops. Alternately the report figures remain incorrectly inflated. One way or another, the reliability of the data is reduced and during the life of AP11033, APAL received several complaints about data quality.

Unfortunately, APAL can only rely on the contributions made by participants and does not have any 'correct' data to supplement the incorrect data provided or not provided.

Nevertheless, the system has given industry a good overview of fruit in store by variety and state. The reports have enabled industry to compare previous years' clearance rates to make decisions about when to hold or move fruit. Those who regularly contribute to the system confirm it is useful and necessary.

A way forward.

At the Key Stakeholders Roundtable[1] in July 2014, a commitment was made by the top 20 growers in Australia to support the system and provide data on a weekly basis. Significant changes and upgrades need to be made to the database system to provide the level of detail desired by industry. This will involve considerable cost wich will be met directly by APAL. GFA (the IT service provider) has indicated that the required database upgrades can be readily achieved.

[1] The Key Stakeholders Roundtable is a forum convened by APAL where the 20 leading businesses from the apple and pear industry come together to advise APAL on the key issues they are facing. The businesses represented at the Roundtable account for 50-60 % of Australia's apple and pear production. The packhouses of these businesses pack of the order of 60-70% of Australia's packed apples and pears.

6. Technology Transfer

The reports generated by the InfoPome system were distributed to contributors and other industry representatives by APAL via email. All reports were, and continued to be, available from the Member’s section of the APAL website.

7. Recommendations

7.1 The importance of the type of market intelligence provided by InfoPome

In Australia, fruit supply has a much greater influence on fruit price than any other variable.

Accordingly, an indication, for the Australian domestic market, of the amount of fruit remaining in store (by variety and state) and a comparison to the amount that remained the year before, is valuable market intelligence for those charged with selling fruit. Clearly a system like InfoPome is required by the industry. Such data is difficult for individual operators to collect.

7.2 Design parameters for a fruit volume information system.

The system needs weekly data. Sales of a number of fruit substitutes (oranges, bananas) markedly impact sales of apples and pears. The sales of substitutes and availability of apples and pears varies markedly from month to month and year to year. Data cannot be extrapolated from one month/season/year to another. Monthly reports are not timely enough to be useful for weekly pricing decisions (e.g. supply proposals to supermarkets). Stock reports are needed on a weekly basis

Does the system need every packhouse operator to contribute their figures? Probably not. If the major packers provide data (as per the promise from the Key Stakeholders Round Table businesses – see above), enough of the market would be covered to give useful indicative trends. It may be possible to "restructure" data from previous years to remove contributions from those coolstore operators who do not reliably contribute data. i.e. data from previous years could be made comparable with future data.

Accordingly, the recommendations arising from this report are:

- to address the IT issues needed to allow weekly reporting of cool store stocks
- to limit data contributions to those coolstore operators who can be relied on to regularly contribute data
- to gather data on a weekly basis and report on a weekly basis
- to otherwise continue to publish the InfoPome reports – because the information they contain is valuable to the industry and is difficult to obtain elsewhere

8. Acknowledgements

The authors would like to acknowledge and thank the following organisations and people:

The government of Australia (through Horticulture Innovation Australia Limited) for their financial support for the InfoPome project.

The staff team at APAL – who have assisted in many aspects of the project – including chasing coolstore operators to make their data available and the distribution of the InfoPome reports.

Attachment 1: InfoPome e-mail report for December 2014

InfoPome coolstore stocks for December

Infopome coolstore stock reports are now available for the month of December.

Based on figures supplied by coolstores, there were 23,600 tonnes of apples in store at the end of December, with 12,900 tonnes being sold during the month.

As you'd expect the main types of apples sold during December were Pink Lady® and Granny Smith. Stocks at the end of December were 14,000 tonnes of Pink Lady and 7,000 tonnes of Granny Smith.

Pear stocks were down to 1,300 tonnes, which were nearly all Packhams.

December Infopome Apple Report
December Infopome Pear Report
December Infopome Lite Report

Wishing you all a Happy 2015! We hope that 2015 is a successful and profitable year for you.

InfoPome is the Australian apple and pear stock tracking system that allows growers and packers to see what volume of fruit is in storage by variety and state. It is exclusively available to those who contribute data.

Contact
Apple & Pear Australia Limited (APAL)
T 03 9329 3511
M 0458 581 221
E afarrow@apal.org.au